# Is it Really NIMBYism?
# The Socio-Politics of Landfills in Appalachian Ohio, USA

A Senior Honors Thesis

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by

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Abstract

This research puts forth a critique of the NIMBY (not in my backyard) discourse, according to which local opposition to controversial land-uses is best explained as misinformed and driven by self-interest. By obscuring the roots of local struggle and radically oversimplifying its logic, this discourse disproportionately serves supra-local political interests. In particular, its conventional portrayal as a rational critique of irrational local behavior disregards a distinctly scalar politics involving contradictory knowledges and uneven relations of power. In Appalachian Ohio, the NIMBY discourse threatens to discount a complex socio-political history, which is fundamental to understanding local resistance to landfills. In this region, challenges to external control have been commonplace for over a century. For example, in the late nineteenth century coal miners organized numerous strikes to resist perceived exploitation by coal companies. While most mines have closed since the 1930s, in recent decades some abandoned mine sites have become profitable as landfills, especially as out-of-state waste imports have increased. Residents insist that they have unfairly become a dumping ground for other people's waste, which they seem to connect to a longstanding cycle of perceived exploitation by outsiders. These sentiments reveal that just as landfills are themselves a legacy of mining, so is local opposition to landfills, which is a legacy of ongoing distrust of outsiders. I argue that this distrust helps explain residents' contemporary interactions with external authorities, such as the EPA, and the concerns

motivating their resistance. In so doing, I demonstrate that the NIMBY discourse produces an inadequate and misleading account of resistance to landfills in Appalachian Ohio and propose that we replace it with flexible interpretations of land-use conflicts that are adaptive to spatial heterogeneity and responsive to manifold interests – including those of oft-neglected localities.

Dedication

This paper is dedicated to the Little Cities of Black Diamonds.

Acknowledgments

This project would not have been possible without the guidance and support of my advisor Dr. Becky Mansfield, family and friends, and countless faculty and staff members at Ohio State. I will forever be grateful for their kindness, generosity, encouragement, and patience.

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# I. INTRODUCTION

This paper, through an analysis of the socio-politics of local resistance to landfills in Appalachian Ohio,[1] puts forth a critique of the hegemonic NIMBY (not in my backyard) discourse, which purports to explain the impetus behind such resistance. According to this discourse, local opposition to controversial land-uses (e.g., landfills, incinerators, nuclear waste facilities, and wind farms) is best explained as misinformed and driven by self-interest. That is, for example, residents seeking to prevent the construction of a nearby landfill exhibit an inadequate understanding of, and/or concern for, 'the common good.'

However, this characterization obscures the roots of local struggle and radically oversimplifies its logic, erroneously seeking to unify disparate movements according to allegedly identical impulses. We must ask, to whose benefit does the NIMBY discourse operate? The results of this research strongly suggest that it has developed from, and disproportionately serves, supra-local political interests. In particular, its conventional portrayal as a rational critique of irrational local behavior disregards a distinctly scalar politics involving contradictory knowledges and uneven relations of power across space. Such a politics typifies decades of opposition to landfills in Appalachian Ohio, where challenges to external authority have been commonplace for more than a century. For

[1] For this research, I utilized the Appalachian Regional Commission's demarcation of Appalachian counties in Ohio (as of 2008) (see Figure 1).

example, in the late nineteenth century, coal miners in the Hocking Valley repeatedly organized to resist coal companies, resenting the control exercised over their communities by wealthy outsiders. Their efforts generated numerous strikes, which often garnered national media attention (e.g., *The New York Times*, 1880; 1884; 1885; 1886). However, by the 1930s most coal mines in Appalachian Ohio had closed as a result of increasingly mechanized mining techniques – particularly with the expansion of surface mining (Crowell, 1995). Left with endemic poverty and degraded landscapes (Morrone, 2008), many residents felt exploited and abandoned by outsiders, insisting that coal companies and government agencies only made short-term, self-interested investments in the region.


Figure 1. Ohio's 32 Appalachian counties
(Figure source: Appalachian Regional Commission, 2008)

In recent decades, some abandoned mine sites have become profitable as landfills, especially as waste exports from New York City and other urban areas have escalated. Each year, Appalachian Ohio landfills import millions of tons of waste, a practice that remains highly contested. In 2008, 84 percent of Ohio's solid waste imports from out-of-state were disposed of in Appalachian Ohio landfills (Ohio EPA, 2010). Opposition to these waste imports largely centers on concerns about spatial equity, or the geographic distribution of benefits and burdens (Fletcher, 2003). Communities in Appalachian Ohio argue that they have unfairly become a dumping ground for other people's wastes and their adverse health, environmental, and economic consequences. As the results of this research suggest, among residents this appears to be perceived as part of a longstanding cycle of exploitation by outsiders.

These sentiments ultimately reveal that just as landfills are themselves a legacy of mining, so is local opposition to landfills, which is the legacy of ongoing distrust of outsiders. Ultimately, I argue that this distrust helps explain residents' contemporary political interactions with external authorities, such as the EPA, and the concerns motivating their resistance to landfills. In so doing, I demonstrate that the NIMBY discourse produces an inadequate and misleading account of resistance to landfills to in Appalachian Ohio, stripping them of their complex socio-political history. The NIMBY discourse treats all movements uniformly, disconnecting them from their unique geographies and neglecting local knowledges. These findings suggest that we must move beyond this discourse, replacing it with flexible interpretations of land-use conflicts that are adaptive to spatial heterogeneity and responsive to manifold interests.

In conducting research for this project, I have worked within a political ecological framework. Political ecology is an interdisciplinary field that explores socio-political dimensions of environmental change and conflict, often placing emphasis on the construction of environmental knowledges and discourses, as well as uneven relations of power and the marginalization of certain groups (Robbins, 2004), issues and topics that are central to my research in Appalachian Ohio. Moreover, this project provides support for McCarthy's (2002) call for a 'First World political ecology,' explaining that while research in the field generally focuses on 'Third World' environment conflicts, political ecology offers a valuable set of tools for critical analysis of 'First World' conflicts as well.

## II. METHODS

This research utilizes a mixed-method ethnographic approach, involving semi-structured one-on-one interviews, archival analysis, participant observation, and landscape interpretation. While I examine issues in communities throughout Appalachian Ohio, I conducted the majority of my fieldwork in counties of the Hocking Valley sub-region (e.g., Athens, Perry, and Hocking). The results of this research are the culmination of an extensive and intensive two-year study.

I began my work on the project during spring 2008 when I joined a research team led by four faculty members, including my advisor Dr. Becky Mansfield, in the Department of Geography at The Ohio State University. The team's larger project is focused on explaining and modeling political and socio-ecological dimensions of post-industrial reforestation in Appalachian Ohio, and initially my research centered on developing a better understanding of legacies of resource extraction and existing tensions between residents and the US Forest Service (USFS) in the context of land and resource management decisions for the Wayne National Forest (WNF). Over time, in response to emerging research findings, my project evolved to examine related issues involving local resistance to landfills and out-of-state waste.

I narrowed my study site to the Hocking Valley, with an emphasis on the Little Cities of Black Diamonds (LCBD) sub-region, through a summer of full-time preliminary

archival research and fieldwork. The LCBD sub-region is comprised of former coal mining towns in southern Perry, northern Athens, and eastern Hocking counties. Based upon my preliminary results, the area seemed to be distinctly affected by legacies of of extractive industry and also engaged in disputes over management of the WNF.

I collected and analyzed articles from newspaper archives dating back to late 1800s, journals, maps, and other sources in order to identify evidence of socio-political conflict between residents and outsiders, namely those associated with industry and government. For example, I obtained copies of over 20 issues of a locally written and published newsletter from the late 1980s and early 1990s, which I analyzed for evidence of local concerns about controversial land-use decisions and for commentary on regional identity, post-industrial economic decline, and effects of external control. Collection of archival data continued through the duration of the project and involved multiple other sources, including video documentaries, books, photographs, oral histories, comments from public hearings, websites, petitions, magazines, and landfill permit applications.

I took my first trip to the area with my grandmother who group up on a farm in Somerset, a town located in northern Perry County, and still has connections to family and friends throughout the county. She took me on a tour of some of the 'Little Cities,' providing a brief oral history of their transition from 'boom towns' during the late nineteenth and early twentieth centuries to the communities of today, which are marked by endemic poverty, outmigration, and other lasting legacies of extraction. As a result of this experience, I developed a very personal connection to the project, and I was able to begin developing trust with local contacts despite my outsider status.

Throughout the project, I took more than 15 trips to the Hocking Valley and conducted semi-structured interviews. In total, I interviewed 13 people (5 females, 8 males). Most interviews lasted for about an hour and were audio-taped and transcribed. Interview subjects included local business owners, government officials, and both current and former residents, whose responses provided evidence for local distrust of outsiders and resentment toward external control, tension between residents and government agencies (e.g., USFS and Ohio EPA), linkages between the coal and waste industries, and active use of the NIMBY discourse to characterize local resistance to landfills.

In addition, I utilized my time in the region, as well as in Columbus and New York City, for landscape interpretation of various sites, including two landfills, the site of a proposed landfill, a transfer station, multiple abandoned mine sites, and areas of the WNF. In total, I visited almost 20 different Hocking Valley towns and documented my findings with hundreds of photographs, which I subsequently compared to historical images of the region (e.g., during its peak industrial period). The combination of these data provided evidence of extensive environmental degradation and economic decline, fragmented ecological renewal through reforestation, connections between mining and waste disposal, and local efforts to communicate the region's mining and labor history (e.g., through public murals and small museum spaces) (see Image 1).

Finally, I also gathered data through participant observation, including by attending a local labor conference and a local history festival, eating at local restaurants, and visiting local businesses and organizations. These experiences allowed me to gain important

insights into local perceptions of outsiders, perspectives on identity, and outlook concerning the region's socio-economic challenges and prospects for recovery.


Image 1. Mining history mural in New Straitsville, Ohio (2008).

## III. INTERSTATE WASTE COMMERCE

Today, landfills – particularly those that import waste from out-of-state – are one of the most contentious land-uses in Appalachian Ohio. Statewide, landfills are permitted to dispose of various types of waste, commonly municipal solid waste (MSW)[2] or construction & demolition debris (C&DD). In 2003, Ohio ranked fourth among top importing states in the US for MSW (McCarthy, 2004), and in recent years the state's solid waste imports have totaled more than 3 million tons annually (excluding C&DD) (see Figure 2).

About 50 percent of Ohio's waste imports originates in New York and New Jersey, the top exporting states in the US (McCarthy, 2007) (see Figures 2 and 3). From 1997 to 1998, Ohio's imports of out-of-state waste rose by 112,000 tons, of which 74 percent (83,000 tons) was attributed to New York's increased contribution (Brown, 2000). The majority of these waste imports from New York come from the New York City (NYC) region (65 percent in 2002), and imports from NYC alone comprise about a quarter of all out-of-state waste shipped to Ohio (Jones, 2003). Still, these figures may be low, as they are based upon incomplete reporting data from disposal facilities.

[2] MSW, generally referring to common residential and commercial garbage, is just one category of solid waste. Other types of solid waste include various industrial and residual wastes.

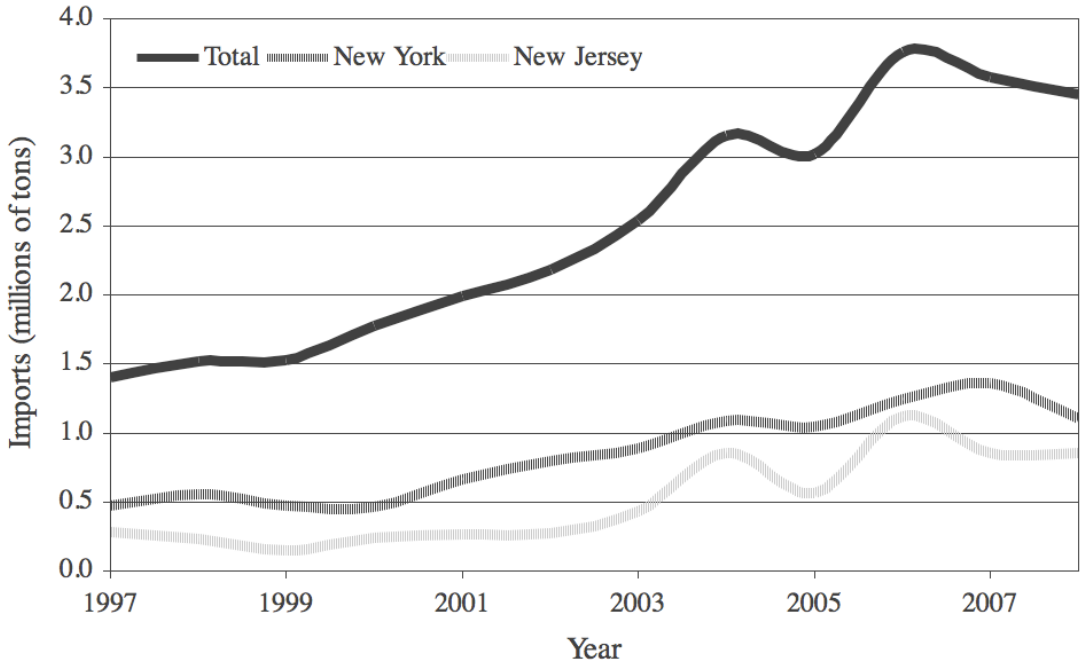


Figure 2. Ohio's solid waste imports (1997-2008)
(Data source: Ohio EPA)

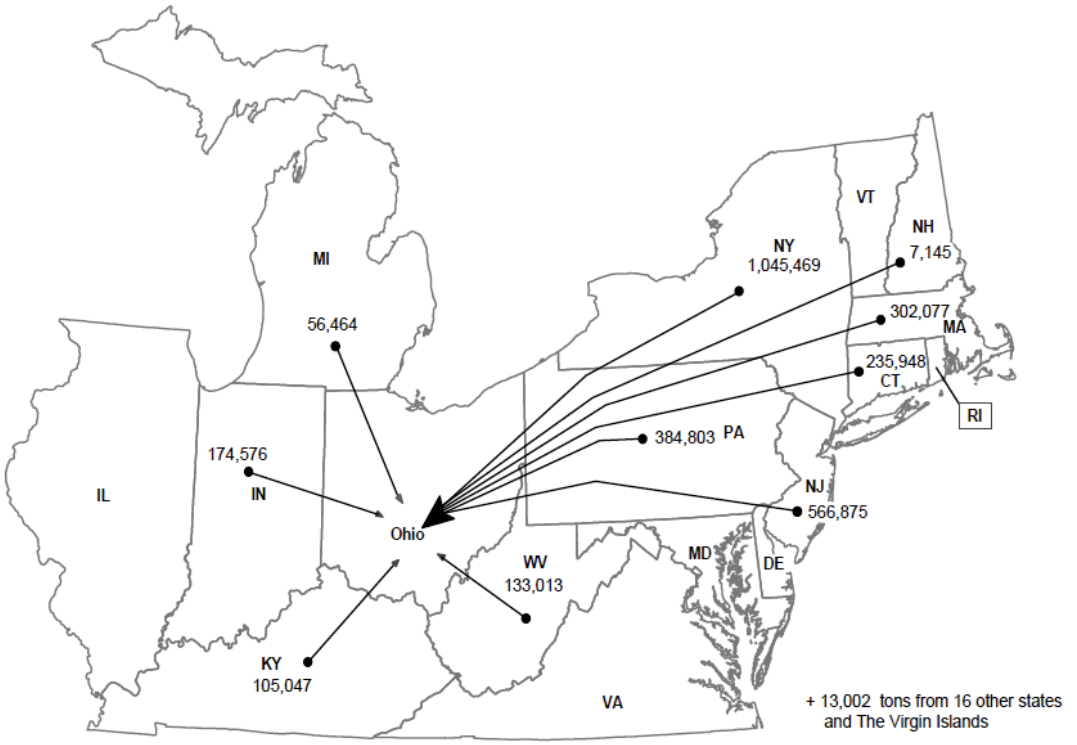


Figure 3. Ohio's solid waste imports from states contributing > 10,000 tons (2005)
(Figure source: Ohio EPA)

While landfills, even those only sourcing 'local' waste, are the subject of opposition, landfills involved in interstate waste commerce are particularly contentious. In the 1990s, Ohio Governor and then US Senator George Voinovich supported legislative efforts that would have enabled states to impose limits on out-of-state waste. However, these and other efforts have been hindered by the Commerce Clause of the US Constitution, under which waste is a commodity, and states cannot restrict its import (with so-called 'flow control ordinances') on the basis of its out-of-state origin. Multiple rulings by the US Supreme Court have reaffirmed this interpretation, including in *City of Philadelphia v. New Jersey* (1978) and *C & A Carbone, Inc. v. Town of Clarkstown, New York* (1994).

However, in 2007, with *United Haulers Assn., Inc. v. Oneida-Herkimer Solid Waste Mgmt. Auth.*, the Supreme Court ruled that flow control ordinances mandating waste delivery to a *public* facility do not violate the Commerce Clause, a decision that contrasted with that of *City of Philadelphia v. New Jersey*, which held that flow control ordinances requiring delivery to a private facility are prohibited under the Constitution.

From 1995 to 2005, reported imports of MSW in the US rose by 147 percent, from 17.1 million tons in 1995 to 42.2 million tons in 2005. In total, interstate exchanges currently make up about 25 percent of all MSW sent to landfills or incinerators in the US (McCarthy, 2007).

Out-of-state waste imports first became a significant concern in Ohio during the late 1980s, when the state's annual imports escalated from 33,000 to 3.7 million tons (Jones, 2003). Today, Ohio remains a top destination for out-of-state waste for multiple reasons,

including its large disposal capacity, direct highway and rail routes to disposal sites (see Image 2), and low tipping fees. The largest disposal capacity and the lowest MSW tipping fees in the state are both found in the Southeast region, which includes most of Ohio's Appalachian counties (Ohio EPA, 2005). Tipping fees are the costs associated with disposing of waste in a landfill, and Ohio's range from $20 to $32 per ton – the lowest of any state in the Midwest or Northeast US (see Figure 4). This contrasts with fees assessed in New York and New Jersey, which average $77 to $84 per ton. As a result, East Coast states often opt to export their wastes, and even with higher transport costs, low tipping fees make transboundary exchanges economically feasible.

Image 2. Weighing station for inbound waste shipments via rail at Tunnel Hill Reclamation Landfill in New Lexington, Ohio (2009).

In 1994, Ohio was even considered as a destination for Toronto's MSW. Reports at the time indicated that approximately 5,000 tons, or about 75 railcars, of the city's waste could be sent each day to a new Waste Management landfill in Adena, an Appalachian town located in Jefferson and Harrison counties (Lane, 1994). However, during the last two decades, imports from New York and New Jersey have consistently drawn the most attention in Ohio.

The waste connection between Ohio and New York deepened following the 2001 closure of Fresh Kills Landfill, located on Staten Island in NYC. The world's largest landfill, Fresh Kills operated for over 50 years, eventually occupying more than 2,200 acres and reaching maximum height of 225 feet (NYC DCP, 2010). Post-Fresh Kills, NYC was left without a waste disposal facility within its borders, causing NYC's waste exports to mount. It was at this time that out-of-state waste imports reemerged as a major statewide environmental issue in Ohio (Riskind, 1999; Jones, 2003).

In the years immediately following the closure of Fresh Kills, the city's waste system relied primarily upon a complex network of privately owned transfer stations, which consolidated waste for export via truck. However, this method of waste transport and disposal quickly generated controversy in communities hosting transfer stations and landfills. In 2006, to begin addressing a major host community concern – heavy truck traffic – NYC adopted a new Solid Waste Management Plan (SWMP) calling for a shift from truck to rail- and barge-based waste shipments for approximately 90 percent of the more than 12,000 tons of residential waste generated by the city each day (DSNY, 2006) (see Image 3).


Figure 4. Average tipping fees in cost per ton (1997)
Top: MSW, Bottom: C&DD
(Figure source: Ohio EPA)

According to the SWMP, Fresh Kills was closed "with the intention of addressing the inequity of a system that burdened one community with the disposal of all the City's residential waste" (DSNY, 2006, ES-5). Nevertheless, the city's move did not eliminate the inequities associated with its waste disposal. Rather, it re-scaled, relocated and multiplied them, simply 'diluting' the problem. That is, fundamental issues associated with the city's *production* of waste were not significantly addressed in tandem with Fresh Kills' closure. As a result, the waste still had to go somewhere, and as this paper will demonstrate, the selection of those 'somewheres' has not taken place without conflict.

Image 3. Curbside waste awaits collection in Manhattan, New York City (2009).

The unequal spatial distribution of benefits and burdens generated by interstate waste commerce has, in fact, been vigorously contested. Communities such as those in Appalachian Ohio argue that they have unfairly become a dumping ground for out-of-state waste. As has been the case in other Appalachian communities, local perceptions of inequity are often connected to broader (and longstanding) concerns related to identity, uneven relations of power, and exploitation by outsiders. For example, in West Virginia, opposition to out-of-state waste has been expressed in this context. As one resident argued, "We're known as hillbillies now, but if we're known as dumb enough to take in trash, then there'll be enormous effects" (Dickstein, n.d., 5). In addition, an attorney representing a West Virginia concerned citizens group further explained, "There is resentment of West Virginia as a colony of New York" (6).

Local concerns about spatial inequity help to demonstrate that opposition to out-of-state waste is not just about waste or landfills in isolation. Rather, resistance movements are often linked to entrenched geographies of uneven power and decades of socio-political conflict. However, this complex stimulus behind local opposition is absent from the NIMBY discourse, which perpetuates a misguided and apolitical characterization of local opposition to controversial land-uses. Nevertheless, government and industry officials (internationally) continue to exploit this narrative to bypass genuine engagement with local communities and accelerate the development process (Wolsink, 1994; 2006).

## IV. THE NIMBY DISCOURSE

During the last two decades, a number of studies have critiqued the NIMBY discourse, arguing that it oversimplifies local resistance to controversial land-uses (e.g., Freudenberg & Pastor, 1992; Welsh, 1993; Wolsink, 1994; Wexler, 1996; Luloff, Albrecht & Bourke, 1998; Gibson, 2005; McClymount & O'Hare, 2008). Nevertheless, this discourse remains widely used, taken-for-granted as an obvious explanation for 'predictable' local opposition (for an example, see Fletcher, 2003, 27). The NIMBY discourse is also in use in Appalachian Ohio. For example, in an interview, the coordinator of a local environmental group offered the following explanation for regional landfill concerns:

> First of all, it's a not-in-my-backyard situation where, you know, "Don't put it next to me. Don't put it on my land." And, you know, "Put it so I don't see it. Put it outside my area that I'm not affected by it." That's what I see as being their solution to it (16 December 2009).

In contrast to those who use the NIMBY explanation as a tool to discredit local opposition, some have suggested that that local groups should adopt the NIMBY label and refuse to fall victim to its pejorative assertions (e.g., Morris, 1994). This approach,

however, seems to mistake and underestimate the discursive power of NIMBY and its assumptions.

### '*The common good'*

One of the central assumptions of the NIMBY discourse, or at least of its conventional form, is that local resistance to controversial land-uses is principally motivated by self-interest and insufficient regard for 'the common good.' That is, according to this characterization, residents opposing a nearby development express (almost exclusively) narrow concerns, which are hostile to civic needs and generate adverse consequences ranging from political and economic paralysis to environmental degradation (Gibson, 2005; for examples, see Sullivan, 1987; Glaberson, 1988; Hornblower, Sachs & Willwerth, 1988).

However, such disparaging charges of local indifference to a universal, static, and externally defined 'common good' are highly problematic. In particular, they neglect the manifold spatial inequities that regularly characterize land-use disputes (Gibson, 2005). That is, despite appeals to defer to societal needs, residents often contend that the disadvantages of proposed developments are locally concentrated, whereas the advantages are externally concentrated (Wolsink, 1994). They feel unambiguously excluded from the common good for which they are expected to sacrifice.

Local claims of spatial inequity challenge the pervasive conception of a singular and objective common good, revealing a multiplicity of competing interests, which are selectively served according to scalar power disparities. As a result, social needs are

constantly in flux and shaped by ongoing contestation across space. Who gets to define the common good is fundamentally a function of (uneven) relations of power. Nonetheless, constructing this self-interest vs. common good dichotomy endures as an effective political tool for discrediting local opponents (Burningham, 2002; Gibson, 2005; McClymount & O'Hare, 2008).

### *Local knowledges*

The NIMBY discourse also relies upon a second assumption, which enables planners, for example, to raise doubts about the legitimacy of local opposition. Specifically, it frames local concerns as irrational, biased, and imprudent, an interpretation that contrasts with the allegedly rational, unbiased, and prudent approach employed by experts. Local residents, with their incorrect or scarce knowledge, must therefore be educated by scientists, government officials, and others with technical, or valid, knowledge (Welsh, 1993; Burningham, 2000). Otherwise, their claims will remain unsubstantiated and dismissible. However, use of the NIMBY discourse may ultimately backfire, bolstering resistance (Freudenburg & Pastor, 1992; Wolsink, 1994; Burningham, 2000).

For example, in a *Dayton Daily News* letter to the editor, one resident explains his frustration with NIMBY characterizations of local concerns about a proposed landfill:

> Our anger, frustration and determination does not come from your so-called "NIMBY" mentality. The issues we address are of extreme importance to all of Montgomery County.[3] The county commissioners and its Solid Waste Advisory Committee refuse to

[3] Montgomery County is in Ohio, but outside of Appalachia.

> grant these relevant issues any legitimacy. If these are the individuals elected to look after our interest and they will not listen, who are we to turn to? (Hershey, 1991, 14A).

Ultimately, the perpetuation of this binary NIMBY explanation sets up an erroneous and overly simplistic opposition between subjective and objective knowledges (Gibson, 2005), which numerous theorists have called into question (e.g., Foucault, 1972; Said, 1978; Haraway, 1998). All knowledges are socially conditioned (even those generated through the positivist sciences) and achieve status as a consequence of exercises of power. Accordingly, following Foucault, knowledges "are creative of the world, not simply reflective of it" (Sharp, 2003, 59). And projects to suppress local opposition through education (by experts) often seek to sustain the dominant forms of knowledge whose power is in question. In contrast to its familiar expressions of impartiality, this tactic is politically motivated and engineered. That is, since official knowledges are never apolitical, they can never be truly objective.

A 1987 article in *The New York Times* recounts former New Jersey Governor Thomas Kean's response to 'NIMBYs' who opposed plans to relocate 15,000 barrels of radon-contaminated soil from a Superfund site to a storage facility in their community:

> The Governor said that people were frightened by what they did not understand, and that New Jersey was trying to combat this with environmental "flying squads" – people with the scientific data and, it is hoped, the ability to communicate it in terms that inform residents about an environmental hazard (Sullivan, 1987).

However, despite continued criticism of local residents as ignorant and baselessly outraged, "the historical evidence reveals that the experts often get it wrong" (Gibson, 2005, 386) and may underestimate risks – sometimes deliberately in order to mollify political and economic pressures (Freudenburg & Pastor, 1992). In contrast, local concerns about environmental hazards often end up validated, despite their initial rejection as merely NIMBY rhetoric (Burningham, 2000). Experiences such as the Love Canal crisis have further reinforced local communities' perception that they cannot count on official knowledges and expert analysis to protect them from environmental hazards. As a result, there exists widespread local distrust of scientists and other experts (Burningham, 2000). As Welsh (2003) explains, in the context of local resistance to nuclear waste disposal facilities in the UK, the "assumption of faith and acquiescence in expert dependency is becoming increasingly fragile" (32).

### *NIMBYism as a 'syndrome'*

Following from the first two assumptions, NIMBY behaviors are commonly described in the context of disease. The selfish, irrational actions of local residents are framed as a psychological obstacle to needed development. There exists, it is claimed, a NIMBY 'syndrome' that must be vigorously combated and corrected. "Our very survival as a society depends on solving this psychological problem," Governor Kean argued (Sullivan, 1987). In addition, the Southern California Waste Management Forum has condemned the NIMBY syndrome as a "public health problem of the first order,"

describing it as "a recurring mental illness which continues to infect the public" (as cited in Wexler, 1996, 99).

This dangerously relies upon the construction of 'otherness' in order to achieve political and economic aims. That is, if local 'others' are selfish, irrational, hysterical, and psychologically impaired, then development proponents can more easily cast themselves as the converse: civically minded, rational, and capable of addressing big issues without being overcome by emotion. Projecting identity in this way came under sharp critique in Said's *Orientalism* (1978), which explored the fundamental roles of power and knowledge in propping up Western colonial activities.

As with colonialism, all knowledge is fraught with uneven power relations that define peoples and places as 'others.' However, this identity imposition must not persist unquestioned. As Said (1978) explains, "the Orient is not an inert fact of nature. It is not merely *there*, just as the Occident is not just *there* either" (4). This is also the case with 'NIMBYs,' whose existence as such must not be considered as always existing or 'natural.'

### *Spatiality of the NIMBY discourse*

All backyards are not identical, and the NIMBY discourse's attempt to depoliticize space often neglects a diversity of historical context that is necessary for understanding the complexity of contemporary land-use disputes. As Wexler (1996) explains, "The backyard metaphor…is an open spatial form that requires a context to give it shape and meaning" (96). Furthermore, Hubbard (2006) notes:

> ...despite many attempts to establish planning as a rational and technical discipline that exists beyond the realms of the social, the planners who arbitrate on land-use disputes inevitably play a key role in the ordering of social space (93).

As the rest of this paper will demonstrate, Appalachian Ohio's history of extractive industry and external control provides essential socio-spatial context for residents' recent opposition to landfills and out-of-state waste imports.

# V. APPALACHIAN OHIO

Appalachian Ohio, part of the larger and primarily rural Appalachian region of the eastern US (see Figure 5), has long been characterized by pejorative stereotypes that relegate its inhabitants to an uneducated, inferior, and culturally backward people. Moreover, Appalachians are simultaneously portrayed as "complicit in their own oppression" (Fisher, 1993, 1) and as militant, with a tendency toward violent activities.

For over a century, Appalachia has been dominated by extractive industries, such as logging and coal mining, which have generated lasting legacies marked by environmental degradation, socio-political conflict, and uneven development. Additionally, control over the region's land and resources, along with the benefits of their exploitation, has historically been externally concentrated. Each of these broad characteristics applies, if incompletely, to the Ohio sub-region, placing it "firmly within the context of the 'Appalachian experience'" (Buckley, Anderson & Bain, 2006, 178).

Coal mining emerged as a dominant industry in Ohio during the mid to late nineteenth century, when the number of mine operations in Ohio surged from 124 in 1850 to more than 600 by 1879. Along with this rise in production came an important shift in the scale of consumption, with what had previously been relatively small operations serving local energy needs quickly transforming into a complex system of large-scale ventures supplying coal to state and national markets (Borycska & Cary, 1982).

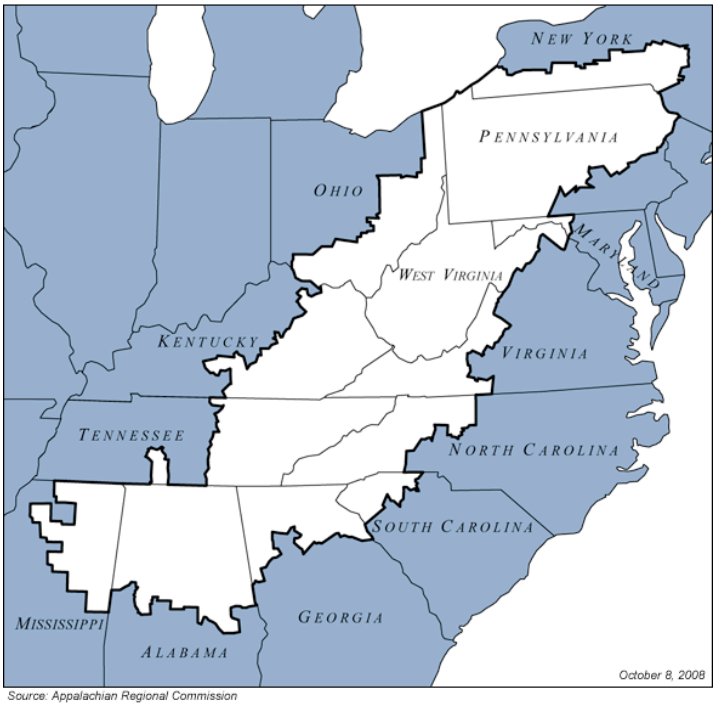


Figure 5. Appalachian region (2008)
Figure source: Appalachian Regional Commission

This transition was chiefly engineered by investors from outside the region who accumulated landholdings to exploit Appalachian Ohio's vast coal seams for profit. However, despite their clear economic interests in the extractive productivity of the region, they were mostly "absentee owners who, beyond their annual profits, had little concern with daily mining operations" (Borycska & Cary, 1982, 65). In New Straitsville (Perry County), for example, significant local investments in industry had all but vanished by 1920 (Bogzevitz & Winnenberg, 1996). Mine owners' persistent efforts to consolidate power and augment profits quickly galvanized dissatisfied miners, who resented the seemingly unlimited power exercised over their communities by wealthy outsiders.

The miners' subsequent actions put into motion what has become a dynamic history of resistance in Appalachian Ohio, calling into question the pervasive narrative of Appalachians as a submissive people incapable of organizing coherent movements of dissension. In particular, miners deplored the meager living and working conditions in isolated company towns, whose structure and operation served as powerful mechanisms for coal companies to assert and maintain control over labor.

Each company town was designed to deliver the greatest economic flexibility to the owner, while cutting off the mobility of the worker. For example, miners were paid through the truck system, earning *scrip*, a currency substitute that could only be redeemed in a particular company town (Crowell, 1995; Blosser & Winnenberg, 2006). Furthermore, miners' low wages and pay schedules generally kept them in persistent debt to the coal company. There was oftentimes a four to six week delay before miners were compensated for the coal they extracted, a lag that forced them to purchase overpriced necessities on credit directly from the company at a company store. Then, upon receiving their pay, miners commonly found that their income was insufficient to repay the debt they had accrued. For example, in an 1879 survey of Ohio miners, 75 percent indicated that for the past five years their annual earnings had not covered their expenses (Borycska & Cary, 1982, 65-66). Nevertheless, as company stores were themselves profitable enterprises, coal companies regularly hired a surplus of labor in order to secure more customers. It has even been argued that the stores may have been more profitable than the mines (Roy, 1907).

As a result, mine owners secured a constant input of cheap labor, enabling them to easily replace dissenting miners (Borycska & Cary, 1982; Crowell, 1995). In addition, to maintain their hold on labor, mine owners financed numerous campaigns to suppress union activities and stabilize wages. However, despite these efforts, miners' dissent culminated in a number of major strikes (Roy, 1907).

Specifically, miners' discontent climaxed with the Great Hocking Valley Coal Strike of 1884-1885, following a massive 1883 merger, through which the ownership of every coal mine in the Hocking Valley was transferred to two large companies: the Ohio Coal Exchange and the Columbus & Hocking Valley Coal & Iron Company (commonly called *the Syndicate*). The companies formed with a common objective: bolstering their resistance against the growing power of labor unions. As a result, miners responded "with unconcealed hatred and hostility," strengthening their commitment to refuse wage reductions and other concessions (Roy, 1907, 216).

Moreover, as one Appalachian Ohio resident explained to me in an interview, with increasing tension between miners and owners, a strong distrust of outsiders emerged in the region:

> During the striking years there often were incidences between labor and capital. So it has left them with a distrust of people that aren't from the area. They used to have signals so you could tell. There's a town here called Chauncey [pronounced *Chancy*]…and one reason it's pronounced the way it is, is supposedly, it's so that they could tell if someone was an outsider. And you could tell if they might be spying on you to see if there was union activity (17 September 2009).

In 1884, with a struggling US coal trade, the Syndicate made two major attempts to cut miners' wages – first by 10 cents per ton, and then in response to a prolonged strike, by 20 cents per ton. Moreover, the Syndicate required that miners, in order to return to work, sign 'ironclad' contracts with numerous conditions, including a commitment to work for the reduced wage for one year and to forgo participation in any strike or union activity aimed at increasing wages (Roy, 1907, 216-217; Blosser & Winnenberg, 2006, 24).

In response to these demands, more than 3,000 miners organized a violent nine-month strike, halting operations at 46 mines (Roy, 1907, 217-218; Borycska & Cary, 1982, 83). In an attempt to overcome this mounting resistance movement, mine owners hired foreign-born strikebreakers and armed guards. In addition, the state militia even joined mine owners' efforts subdue the uproar (Borycska & Cary, 1982). The strike finally ended in 1885 with miners accepting a 30-cent wage reduction and the Syndicate withdrawing its contract demands and abandoning the truck system (*The New York Times*, 1885; Roy, 1907).

The Hocking Valley strike also resulted in the New Straitsville Mine Fire when, in 1884, striking miners loaded coal cars with timber, lit them on fire, and drove them into multiple mine openings, igniting a massive underground blaze (Crowell, 1995). This mine fire persists as one of multiple legacies of extraction, on which I elaborate in the following section, that have shaped the region over the last 70 years.

As Kaabe Shaw, coordinator of the Sunday Creek Watershed Group, explains:

It was really beautiful here then. They had a lot of money. The money was temporary, though. The jobs were temporary. That's part of the legacy of these hills – the industries take from these communities, but once the coal is gone, they leave. But what the industries left behind can last forever (Hartman, 2008, 22).

# VI. LEGACIES OF EXTRACTION

Since the 1930s, most coal mines in Appalachian Ohio have closed and mining employment has declined steadily, despite a continued rise in coal extraction until 1970. Between 1884 and 1908, mining employment in Ohio reached a yearly peak of 50,267. However, by the mid-1990s there were fewer than 4,200 Ohio workers employed by the state's coal mining industry (Crowell, 1995, 57). As a result of widespread mine closures and expanded use of mechanized mining techniques, particularly with the post-World War II expansion of surface mining (Crowell, 1995), Appalachian Ohio's economy entered a lasting period of economic decline, from which it has yet to recover (see Image 4). Although surface mining techniques have been used in Ohio since 1914, their use expanded significantly during and after WWII (Dickman, 1964). Since WWII, surface mining has impacted approximately 10% of the Ohio landscape (McSweeney & McChesney, 2004, 43).

Today, with few jobs left, aging communities grapple with endemic poverty (Arbogast, 2004; Morrone, 2008), and to them the effects of mining and external control are still vivid. In fact, residents argue that similar forces are at work today, with government agencies largely assuming the role of external control agents (Bogzevitz & Winnenberg, 1996).


Image 4. Local history group seeks donations in New Straitsville, Ohio (2008).

*Evolution of external control*

Since the decline of mining employment, a number of governmental actions have inspired skepticism from Appalachian Ohio residents. For example, in the mid 1930s the Works Progress Administration (WPA), a New Deal agency formed under President Franklin Roosevelt, came to Appalachian Ohio in an effort to put out the New Straitsville Mine Fire, which was still burning decades after its ignition. Although employing 300 workers in three different attempts to extinguish the fire, the WPA was ultimately unsuccessful, and the agency exited the region with the underground fire still burning. In

fact, the New Straitsville Mire Fire still burns in some places today, more than a century after the Great Hocking Valley Coal Strike (Crowell, 1995).

To some residents, the WPA's short-term stay revealed a troublesome pattern of temporary external investment followed by abandonment. That is, the departure of the WPA seemed to mirror their earlier experience with industry. As one Appalachian Ohio resident explained in an interview:

> People from the WPA worked here for a period of time, left, and conditions didn't really improve. So, people perceived government was to blame for not really being here long-term to fix solutions to problems (16 December 2009).

Moreover, there also exists widespread local distrust and resentment of the USDA Forest Service (USFS), whose management of the Wayne National Forest (WNF) has generated ongoing controversy. Since the 1930s, the federal government has invested in the acquisition and reforestation of abandoned mine lands in the eastern US, including in Appalachian Ohio, a long-term reclamation effort that gained early momentum through projects of the Civilian Conservation Corps, another New Deal agency (Shands & Healy, 1977).

These early purchases of so-called "lands nobody wanted" generated a fragmented landscape with intermixed public and private landholdings (Shands & Healy, 1977). However, while some acquired lands were degraded and unoccupied, others had not simply been abandoned. Rather, some acquired lands were the properties of owners who, struggling during the Great Depression, could no longer pay their taxes. After being

bought out, their homes were generally demolished (Andrews & Fetsch, 2005). Oral histories demonstrate that there was, in fact, "some resentment for how cheaply the land was purchased" (Bashaw et al., 2007, 40).

Today, the WNF, whose official boundaries demarcate 833,990 acres, consists of 241,004 acres of publicly owned forestland. In some counties, this has generated a significant land and resource management role for the USFS. For example, 25 percent of Lawrence County's total land area is owned by the USFS and managed as part of the WNF (USFS, 2009). Accordingly, a perception persists in the region that "they can buy anything they want" (Interview, 17 September 2009). To residents, the federally sponsored reforestation program has perpetuated the longstanding pattern of external control in the region. Many "remain skeptical about working with agencies (government or not) and fear that they may lose some control over their property" (Bashaw et al., 2007, 51). As one USFS employee explained to me, as a result of ongoing frustration among residents, she is often advised not to wear her uniform when working in the community. Area residents "hate government," she said (Interview, 21 July 2008).

With the Forest Service's considerable and growing presence, residents have become concerned that untaxed federal landholdings are weakening the region's property tax base (*The Ironton Tribune*, 2002; Bodine & Koontz, 2003; Arbogast, 2004). Some argue that while forestland generates beneficial economic activity such as tourism, the WNF is precluding counties from attracting much-needed private development, and making important investments in their public schools. "We're pro-forest," Lawrence County Commissioner George Patterson said. "But when it comes to dollars and cents, it's rough.

It affects our budget. School districts are affected too" (*The Ironton Tribune*, 2002). Similar concerns about taxes and land acquisition have been reported in counties across the US, tending "to sour virtually all relationships between counties and the Forest Service, inhibiting possibilities for cooperative action" (Shands & Healy, 1977, 225-226). While local frustration with the WNF is ongoing, it remains unclear whether the forest is generating a net positive or negative effect on the region's tax base (and economy in general), as federal revenue-sharing programs such as PILT (Payments in Lieu of Taxes) have helped make up for lost tax dollars (Bodine & Koontz, 2003; Arbogast, 2004).

Similar skepticism toward external intervention in Appalachian Ohio was also identified in 1994 when the Monday Creek Restoration Project formed to remediate contamination of the Monday Creek Watershed by acid mine drainage. However, despite their relatively uncontroversial objectives, the organization was not immediately accepted by the local community. Even non-governmental groups are perceived through a skeptical lens, applied to outsiders in general and government specifically. As Appalachian Ohio historian Cheryl Blosser explains:

> There's a certain attitude of, any big entity is probably related to government, and government attention is usually negative. At least in this region, that's how it's seen. So, the first thing they're going to say is, "Is this a government office, and how soon are you leaving?" Because that's what they really thought, was they'll stay for a little while, and then they'll be gone. There'll be promises, and they'll be gone (Lewis, 2007).

These sentiments, rooted in a complex history of local conflict with external authorities, whose activities have often been perceived as exploitative and whose

investments have been seen as temporary, are critical to understanding contemporary distrust of government agencies. Moreover, as the results of this research indicate, these deeply engrained perceptions among Appalachian Ohioans offer an important socio-political context for contemporary resistance movements against landfills and out-of-state waste, a context that is neglected by the apolitical NIMBY discourse. However, NIMBYism remains a widely cited explanation for local opposition to landfills. For example, when I asked a local governmental official about community opposition to a proposed landfill in the region, he responded, "The biggest concern is: 'We just don't want it in our backyard.' That was the biggest concern" (2 August 2009).

### *Mines as landfills: opportunity or exploitation?*

In recent decades, some abandoned mine sites, degraded and devalued, have become profitable as landfills – especially as waste exports from New York City and other urban areas have escalated (Rogers, 2005). The conversion of mines to landfills was identified as an opportunity in Ohio as early as 1972, when McComas explained that former strip-mines provided cheap land for solid waste disposal and could be reclaimed "using waste as a construction material" (70). However, the re-use of surface mines, in general, as 'sanitary dumps' was described even earlier, including by Brooks (1966).

In Appalachian Ohio, some landfills are owned by surface mining companies that have converted mined land into disposal sites (see Images 5 and 6). For example, Oxford Mining Company owns Tunnel Hill Reclamation, a landfill located on a former mine site in northern Perry County; the company also operates an active surface mine adjacent to

the landfill (Weaver Boos, 2006). According to Morrone (2008), the availability of inexpensive land is a central factor in siting decisions for waste facilities. As a result, it makes sense that abandoned mine lands are attractive locations for landfills.


Image 5. Athens-Hocking Landfill and Surface Mine in Nelsonville, Ohio (2010).

A&L Salvage in Lisbon (Columbiana County) also operates on a former surface mine, filling it with approximately 1,000 tons of C&DD, or roughly 50 truckloads, each day from states such as New York, New Jersey, and Connecticut (Napsha, 2007; ODH, 2009). Other active landfills constructed on mined land in Appalachian Ohio include Beech Hollow Landfill, Coshocton Landfill, and Central Waste, Inc. (US EPA, 2004;

Agnew, 2007; Rumpke, 2009). Additionally, in 2006, a New York-based firm announced plans to mine coal, clay, and limestone on an 8,000-acre site in Lawrence County. The company then planned to construct a landfill on a portion of the mined land and begin importing waste (C&DD and MSW) from out-of-state (Hunt, 2006; Moore, 2006). Constructing landfills on mined land has also been proposed at other sites in the US and Canada (e.g., Swanson, 1991; Dorroh & Jones, 1996; Hall, 2004; Breitenbach, 2010; Light, 2010).

Image 6. Tunnel Hill Reclamation Landfill in New Lexington, Ohio (2009).

Aston (1999), an adjunct professor at the University of Missouri-Rolla who has been active in the mining industry (including as a mine owner) for decades, argues that the conversion of surface mines to solid waste landfills (as 'reclamation') should become standard practice, and that surface mines and landfills should be jointly permitted. A primary advantage of this planning approach, Aston contends, is that it would "expedite the regulatory processes for permitting and licensing...particularly to combat the NIMBY (Not in My Backyard) syndrome" (6), which he steadfastly decries:

> Further involvement by the lay public and placing reliance on the unscientific whims as generated by unbased or misinformed feats of environmental damage and the NIMBY syndrome only serves to vexatiously delay essential excavation projects. They incur an added and unnecessary public inquiry process, superfluous environmental protection costs, and generally compound the problems and conflicts. In the case of urgently needed landfill space, the delay by prolonged public hearing process only serves to exacerbate the urgency (268).

Linkages between coal and waste are also evident in other areas of Appalachia. For example, in 1987, a West Virginia surface mine owner argued in favor of waste imports, citing their economic benefits. That is, he explained, by shipping coal to the Northeast US and returning with truckloads of out-of-state waste, his company was able to reduce the cost of its coal by $8 per ton (Davis, 1987).

Moreover, mine sites are commonly utilized for the disposal of coal combustion wastes (CCWs) (e.g., fly ash), produced by coal-burning power plants (Elcock & Ranek, 2004). For example, the American Electric Power (AEP) Conesville Landfill in

Appalachian Ohio was constructed between the highwalls[4] of a former mine (US EPA, 2002). Despite being touted as an effective tool for mine reclamation (e.g., AEP, 2010), CCW 'minefill' practices have been targeted as under-regulated and hazardous to public health (e.g., Keating, et al., 2009). In 2004, approximately 129 million tons of CCW were generated in the US, with Ohio ranking sixth among top producers, trailing only West Virginia, Pennsylvania, Indiana, Texas, and Kentucky (Elcock & Ranek, 2004).

In Appalachian Ohio (and in some adjacent counties), the development of mine lands for waste disposal has been a source of contention, with residents regularly expressing concerns about proposals to construct landfills on abandoned mine land or near ongoing mining. At public meetings held by the Ohio EPA, and in newspaper interviews, residents have voiced concerns about subsidence, groundwater contamination, and effects of surface mine blasting on landfill structures (e.g., Woods, 1990b; OEPA, 2006; Young, 2010).

A key example is a case in Shawnee (Perry County) that I studied in some detail. Beginning in 1991, residents in Shawnee organized to protest a proposed C&DD landfill on a 157-acre site that had previously been mined (Ohio EPA 1991; 1991b). In a letter to the Ohio EPA, Shawnee Mayor William Griffith indicated that residents were increasingly concerned about the underground mines, which they feared could ultimately promote groundwater contamination from a constructed landfill (Griffith, 1991). Bob Hannah, a local business owner, further expressed these concerns. "The EPA hasn't shown me that they have any concern about the underground mines," Hannah said. "I am

[4] Highwall mining is a form of surface mining.

not really too concerned about air pollution. It's the water pollution that concerns me" (Woods, 1991, 02C).

When discussing air pollution, Hannah is referring to the Ohio EPA's permitting process. C&DD landfills were (and still are) only required to obtain an *air* permit to mitigate issues such as so-called 'fugitive dust' emissions that could result from a facility's operation. The following year, the Ohio EPA was scheduled to adopt new rules for C&DD landfills that would impose stricter requirements for groundwater protection (e.g., by requiring a liner system). Residents became increasingly concerned that the proposed landfill, Perry Environmental Recycling, Inc. (PERI), would complete its permitting process beforehand and not be accountable to the new rules. As a result, they formed Southern Perry County Citizens for a Clean Environment (SPCCE) and began calling for a statewide moratorium on all C&DD landfills until the new rules were implemented (*Community Life News*, 1991b).

One resident, reflecting on the group's campaign, referred to the area's history of exploitation by outsiders as a central factor driving SPCCE's efforts and motivating residents to participate:

> …the fear of something bad being foisted upon us. And people in Shawnee and throughout southeastern Ohio have already a chip on their shoulder about being the dumping grounds for, you know, any unwanted waste, you know, so it's easy to get people to stand up and say, "Oh, what are you gonna do to us now?" (Interview, 24 January 2010).

SPCCE spent six months writing letters, gathering more than 600 petition signatures, and attending hearings to express their concerns. Finally, in February 1992, the Ohio EPA issued a moratorium on C&DD landfills until the new rules could go into effect. SPCCE claimed this as a major victory and evidence of their power to organize an effective resistance movement (*Community Life News*, 1992).

Months earlier, reflecting on a public hearing, SPCCE member John Winnenberg said that residents had exercised "their right to speech and their right to know in a community that is sometimes written off as 'easy prey' by unethical businesspersons and politicians." He continued, "They will now think twice before they make any decisions on this matter" (Winnenberg, 1991, 2).

### *Downplaying risk*

Residents in Appalachian Ohio continue to organize groups such as Club 3000, Keep Perry County Ohio Clean, and Tri-County Concerned Citizens to express myriad concerns about landfills. These include odors and related health effects (e.g., associated with hydrogen sulfide), groundwater contamination, truck traffic, property values, and contaminated waste (particularly via out-of-state waste shipments). Tri-County Concerned Citizens, for example, has been very active in voicing concerns about Apex Sanitary Landfill in Jefferson County. In 2008 alone, the Jefferson County Health Department received 839 odor complaints about the landfill (Gossett, 2009). However, residents often find governmental responses to be inadequate and have expressed their frustrations at public hearings. For example, at an Apex hearing in 2009, someone asked,

"Is it not your mission and goal to protect our environmental for us? If not the Ohio EPA, then who?" (Ohio EPA, 2009, 7).

Moreover, in 2006, a local group protesting the proposed Tunnel Hill Reclamation landfill argued that the Ohio EPA was failing to consider "negative social impacts" during the permitting process for the proposed landfill. These concerns were the focus of a petition circulated by Keep Perry County Ohio Clean, for which the group collected 1,981 signatures (Ohio EPA, 2006, 11). Nevertheless, when residents remarked at a Tunnel Hill Reclamation public hearing that adverse social impacts of the landfill had been neglected, the Ohio EPA responded by explaining that while "the director may take into consideration the social and economic impacts" that could result from issuing a permit, the agency "must consider a proposal based on its technical merits" and ability to comply with state regulations (Ohio EPA, 2006, 3-4).

Reflecting on local concerns at the time, one local government official said, "It was probably the same 10 to 20 who'd come to every meeting. They'd say the same thing, but they didn't have any scientific research behind what they were saying. … They just didn't want it there" (Interview, 2 August 2009). This claim corresponds with an important characteristic of the NIMBY discourse – suggesting that local opponents "are not qualified to make their argument" and suffer from a deficiency of evidence for their concerns (Burningham, 2000, 64).

Nevertheless, as landfill host communities have often discovered, despite early reassurance of landfills as safe or demonstrating no significant environmental or health hazard, serious concerns often emerge after the permitting process is completed. In the

long-term, hazards are often discovered that were not captured by early technical assessments or were downplayed by industry representatives, who assured their companies' compliance with state regulations. This is evident, for example, in the case of local concerns about contaminated waste shipments from out-of-state.

Such contamination was a core concern among Shawnee residents protesting PERI who feared that the landfill, which intended to store C&DD, could end up receiving various hazardous or banned wastes. Although residents' foremost concerns related to potential groundwater contamination issues, they also expressed concern about the possibility for these contaminated out-of-state waste imports, citing reports of banned substances from New Jersey finding their way to Ohio (*Community Life News*, 1991b, 1992). As Shawnee Mayor William Griffith explained, "I know they say it's just brick and steel, but I'm worried about what's in the middle of the loads that will get hauled in there" (*Community Life News*, 1991, 1). Still, PERI downplayed these concerns, implying that they were exaggerated or unfounded.

In response to local concerns about toxic materials hidden in shredded or pulverized out-of-state waste, PERI owner Michael Hartman said, "You can't shred bricks and steel. We will have a safety compliance person checking trucks when they come in to make sure there's nothing illegal" (*Community Life News*, 1991, 12). Moreover, Hartman argued, "Down the road they'll find that we're not the nemesis that they think we are" (Woods, 1991, 02C).

However, earlier reports did indicate that other waste facilities in Ohio had received contaminated imports. For example, in 1987, Ohio EPA Director Richard Shank said that

one exporter had hidden hazardous waste in the bottom of steel drums in MSW shipments (Yocum, 1987), an illegal practice known as 'cocktailing' (Rogers, 2005). Moreover, a 1984 explosion at an Akron incinerator was attributed to a New Jersey company mixing flammable solvents into what was supposed to be oil-soaked sawdust. Three people were killed in the explosion. As a result of such developments, Shank said, "I DON'T think we have a very good idea how much waste is coming in, and we have no idea where the source might be" (Yocum, 1987, 1C).

Since the PERI landfill was never constructed, it is impossible to know whether these issues would have emerged at that site. However, a more recent case (also in Perry County) seems to have followed similar early developments. Tunnel Hill Reclamation, in its early stages, was opposed by some residents, in part, because of concerns about contaminated waste shipments. Also, like PERI, Tunnel Hill was initially proposed as a C&DD landfill, with the landfill owner downplaying local concerns. "This is not a municipal solid waste landfill," owner Chuck Ungurean said. "If we see something in a rail car we don't think is right, we won't take it" (Sheehan, 2003, 01C).

Nevertheless, just over a month after Tunnel Hill opened, reports emerged of banned items such as furniture and tires finding their way into shipments from Massachusetts. Perry County Health Commissioner Robert Titko said the landfill did not have enough people to carefully sort incoming waste, so it seemed that everything was just being buried, potentially including asbestos (Lane, 2003). Contaminated waste has remained an issue at other sites in Appalachian Ohio (and in some adjacent counties), as comments

from public hearings reveal (e.g., Ohio EPA, 2006b; Ohio EPA, 2007). Furthermore, as Ohio EPA Director Christopher Jones explained in a 2003 testimony before Congress:

> It is difficult or impossible for state and local inspectors to verify that hazardous or untreated infectious waste has not been included in solid waste shipments that are shredded or heavily compacted before being shipped long distances (1).

In fact, it turns out that landfill-related risks have been repeatedly underestimated or downplayed initially, only to emerge later as a significant concern. In Ohio, this has been demonstrated with C&DD landfills, which were long considered inert, posing no significant environmental or health risks. However, studies continue to show that they can often pose greater risks than other facilities, in part, because they are commonly less strictly regulated. This continues to be the case in Ohio.

One major concern associated with C&DD landfills involves the production of hydrogen sulfide from decomposing gypsum drywall. For example, an Agency for Toxic Substances and Disease Registry (ATSDR) investigation into reports of hydrogen sulfide emissions and periodic fires at a Trumbull County landfill led the agency to conclude that the site posed an "urgent public health hazard," requiring immediate action (Lewis et al., 2008; Colledge & Wilder, 2008).

### *Spatial inequity*

Landfills in Ohio's Appalachian counties import more waste from out-of-state than any other part of the state. In 2008, approximately 84 percent of Ohio's solid waste

imports were sent to landfills in the Appalachian region (see Figure 6). These imports, while shared by multiple facilities (see Figure 7), were mostly disposed of at two landfills: Apex Sanitary Landfill (Jefferson County) and BFI Carbon Limestone Sanitary Landfill (Mahoning County). Combined imports by these facilities came to approximately 1.97 million tons, or 81.4 percent of the regional total (2.42 million tons).

In Appalachian Ohio, residents' resistance to these imports broadly centers on concerns about spatial inequity. That is, residents argue that their communities have become dumping grounds for out-of-state waste and its myriad environmental, health, and economic burdens – all while recognizing few benefits. Such distributive patterns, involving scalar disparities in benefits and burdens, have been noted widely. As Pellow (2002) explains, throughout most of the world, the most consumptive societies (those generating the largest volumes of waste) tend to amass the greatest environmental benefits, while being the least likely to live or work near waste facilities. Communities in Appalachian Ohio have long seen in the region as bearing an unjust burden share, with most benefits remaining externally concentrated. In West Virginia, according to Dickstein & Sayre (1989), there is a similar history of external control (e.g., by coal, timber, and oil industries) and waste imports were "considered the most recent example of exploitation by outsiders and outside regions" (36).

Impoverished communities in Appalachian Ohio remain vulnerable to landfills, where modest job creation and other economic benefits can sometimes be difficult for local governments to reject. For example, in 1992, reports emerged about a Mid-American Waste Systems proposal to construct a landfill in Vinton County. The company sought to

gain support by making a series of promises to the local government, including an initial $80,000 grant to the county commissioners' fund, followed by an annual contribution of $95,000. Nevertheless, some in the community were unsettled by the company's financial

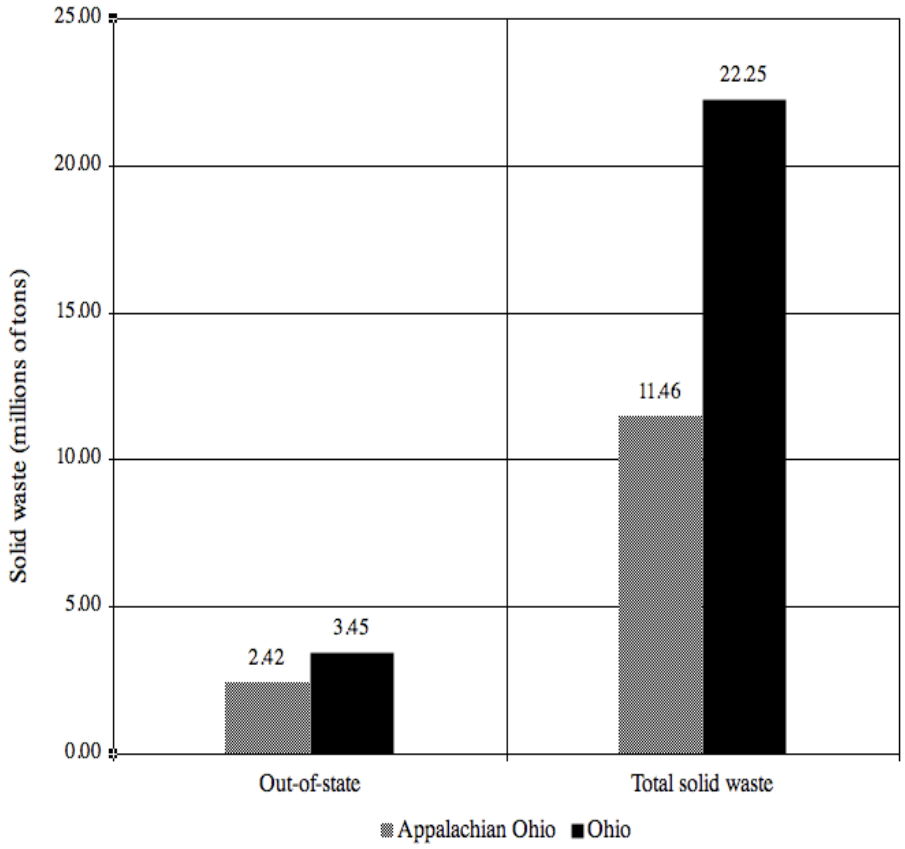


Figure 6. Solid waste accepted at Ohio landfills (2008)
(Data source: Ohio EPA)

proposals, with one resident arguing they were aimed at "buying out local government cooperation" (Powers, 1992, 05B). As a *Columbus Dispatch* report explained:

> ...some people are wondering whether the deals (called "host community benefit packages") provide landfill companies an opportunity to capitalize on a local government's needs –

particularly in financially strapped communities such as Vinton County – for a chance to silence official local opposition early (Powers, 1992, 05B).

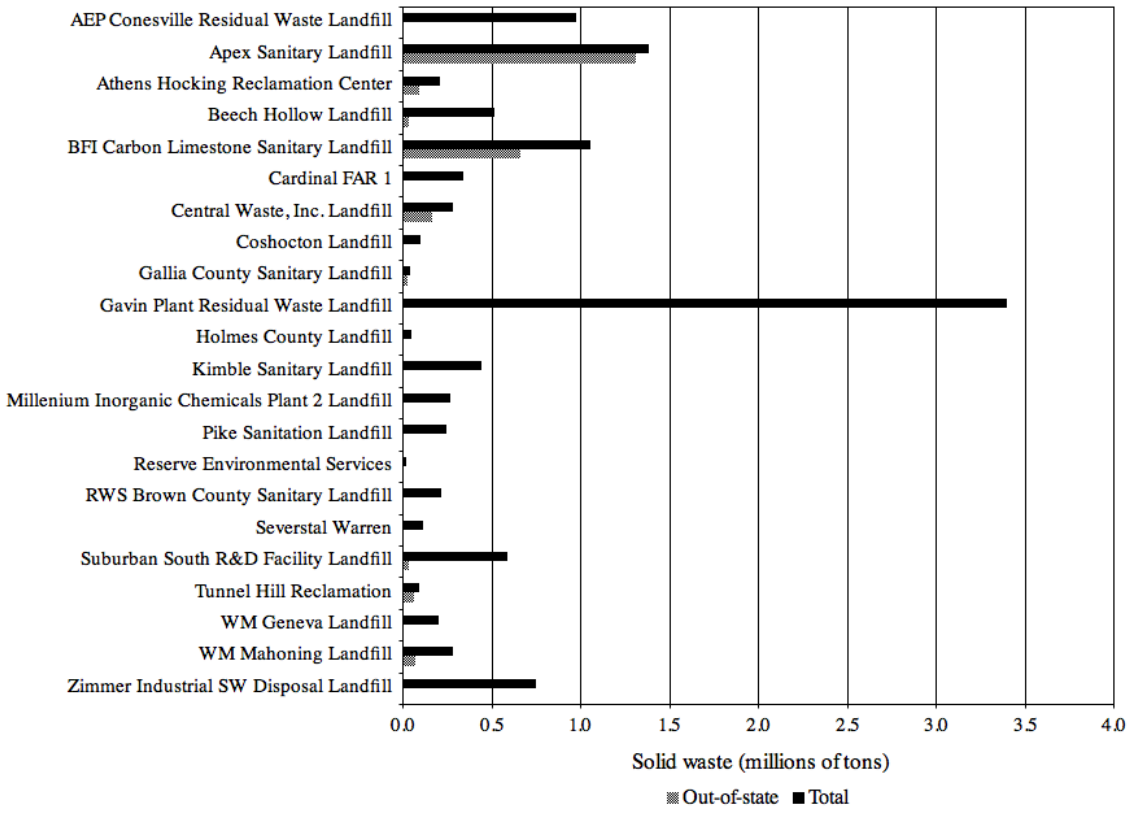


Figure 7. Solid waste accepted at Appalachian Ohio landfills (2008)
(Data source: Ohio EPA)

These measures, however, are not always successful at suppressing opposition, and may even generate additional resistance from host communities. "They think money is more important to us," one Waynesburg[5] resident said in response to arguments for the local economic benefits of a Waste Management-owned landfill. "To this community, clean water and clean air are priceless" (Hunt, 2004, 01A).

[5] Waynesburg is located in Stark County, just outside of Appalachian Ohio.

Furthermore, in 2009, Tuscarawas County Commissioner Kerry Metzger responded to a settlement between the Ohio EPA, along with the Stark County Board of Health, and Republic Waste Services concerning Countywide Landfill. The settlement called for a $3 million contribution to a community benefit fund. According to Metzger, the fund was "a way for the Ohio EPA to buy goodwill from the community." He argued that it failed to "get at the core problem" of the landfill and expressed concerns about long-term hazards that could develop at the site, asking, "Who will be responsible for dealing with those issues?" (*The Times-Reporter*, 2009).

The neglect of long-term risks is also typical of the NIMBY discourse, which regularly "discounts real or perceived risk to health and well-being," (Luloff, Albrecht & Bourke, 1998) suggesting that local concerns "do not correspond with real risks" (Wolsink, 2006, 88). However, as Commissioner Metzger's comments suggest, long-term risks associated with landfills are not well understood and may ultimately generate further socio-political conflict between host communities and external entities – namely the Ohio EPA and waste companies.

What will become of these landfills after their owners' liability is abrogated? In Ohio, landfill owners are only required to monitor their sites for 30 years post-closure (Ohio EPA, 2004). As one government official explained to me, "We watch it when the failure is least likely," (Interview, 22 March 2010); that is, when major environmental and health hazards are least likely to emerge. What will transpire after a landfill's liner system begins to fail and its contents penetrate surrounding soils and waters? As Metzger asks, who will be responsible for the site then?

Herein lies an important prospect for future conflict, building upon legacies of extraction in Appalachian Ohio. Residents have long felt exploited and abandoned by outsiders, leading to a palpable distrust of authority – including both industry and government. If, or more likely *when*, decades from now, major landfill hazards begin to emerge and their owners' accountability has already been eliminated, Appalachian Ohio residents' longstanding distrust of, and resistance against, external authority is bound to intensify. That is, they are likely to perceive exploitation and abandonment by outsiders, establishing further linkages between the coal and waste industries.

# VII. DISCUSSION

The NIMBY discourse generates a de-contextualized, de-politicized account of resistance to landfills and out-of-state waste imports in Appalachian Ohio, obscuring the lasting legacies of a complex socio-political history. Residents of the region are motivated by what they perceive to be patterns of highly inequitable and externally imposed methods of land and resource management, including decisions involving landfills. The numerous legacies of resource extraction in the region provide a useful framework for understanding contemporary resistance to landfills and suggest that residents may consider the importation of out-of-state waste as yet another instance of exploitation by outsiders, a mining-waste connection that has also been identified in West Virginia (see previous section). As the results of this research indicate, it is necessary to move beyond the NIMBY discourse, replacing it with flexible interpretations of land-use conflicts that are adaptive to spatial heterogeneity and responsive to manifold interests. In particular, government officials and industry representatives must work to understand local concerns and avoid engaging in a discourse that simply aims to discredit them. Otherwise, local resistance is likely to increase.

Moving beyond the NIMBY discourse requires a decentering of what counts as knowledge, breaking from NIMBY's sole dependence upon official or expert (centralized) knowledges, which are erroneously represented as apolitical. However, in so

doing, local or marginalized knowledges must not be romanticized or exempted from critical examination, which would be just as misguided and problematic (Haraway, 1998).

Furthermore, a more effective approach demands a re-contextualization of resistance to landfills and other controversial land-uses by engaging socio-political histories and multiple spatialities of inequity (Walker, 2009). Conflicts over the siting, operation, and closure of waste facilities such as landfills are not merely concerns to be *managed*, as the conventional NIMBY perspective suggests (Wexler, 1996).

Landfills and interstate exchanges of commodified wastes have generated, or more accurately, have exacerbated existing spatial inequities. Understanding the production of this unevenness, including the role of discursive strategies like NIMBY, is crucial for understanding local resistance movements such as those in Appalachian Ohio. However, examining concerns about spatial inequity must not be limited solely to problems of distribution. Rather, as Walker (2009) argues, a multidimensional approach is necessary, moving toward "more complex scaled spatial relations and flows" revealing "multiple ways in which wellbeing, vulnerability and environment are spatially intertwined" (615). This expanded perspective involves, for example, issues of identity (e.g., 'NIMBYs') and of process and participation, including recognition that siting a landfill is not an isolated event, but rather a complex process rooted in multiple socio-spatial contexts. Moreover, conflicts over spatial equity are constantly being re-scaled, a process which must also be subject to critical examination. While re-scaling spatial equity (e.g., by shifting from local waste disposal to out-of-state exports) may be proposed as a solution, it really only represents the dilution of a problem, redistributing its effects across space without

addressing the core problem itself (e.g., the production of waste). By focusing on uneven distribution alone, we may lose sight of addressing its structural roots, those complex socio-political processes from which it emerged.

Developing a better understanding of the interconnections between spatial equity and scale is a primary focus of my planned future research, through which I will build upon the results of this study in Appalachian Ohio by examining Toronto's international and intra-provincial waste exports.

# REFERENCES


Agnew, G. (2007, January 20). From strip mine to landfill: evolution of Central Waste. *The Review*. Retrieved on 23 May 2010 from http://www.the-review.com/news/ article/ 1499692

American Electric Power (2010). FGD Project at Conesville Coal Prep Plant. Retrieved on 23 May 2010 from http://www.aep.com/about/coalCombustion/currentProjects/ FGD.aspx

Andrews, J & S. Fetsch (2005). *A Forest Returns: The Success Story of Ohio's Only National Forest as Told by Ora E. Anderson*. USA: Ohio Landscape Productions.

Aston, R.L. (1999). *The Legal, Engineering, Environmental and Social Perspectives of Surface Mining Law and Reclamation by Landfilling: Getting Maximum Yield from Surface Mines.* London: Imperial College Press.

Arbogast, K. (2004, January). Social and Economic Assessment for the Wayne National Forest. (Ed., T.M. Koontz). Wayne National Forest.

Bashaw, A., et al. (2007). *At the Glacier's Edge: An Environmental History & Field Guide of the Little Cities of Black Diamonds Microregion*. Shawnee, Ohio: Sunday Creek Associates.

Blosser, C. & J. Winnenberg (2006). *Agents of Change: The Pioneering Role of the Miners of the Little Cities of Black Diamonds in the Nation's Labor Movement.* Shawnee, Ohio: The Little Cities of Black Diamonds Council.

Bodine, J. & T.M. Koontz (2003, October). Impacts of federal lands on local government tax bases: a policy summary. ECARP Working Group, School of Natural Resources, The Ohio State University.

Bogzevitz, C. & J. Winnenberg. (1996). *Our Journey Continues: The History of New Straitsville, Ohio: Volume Two: 1925-1950*. New Straitsville, Ohio: The New Straitsville Betterment Association & Sunday Creek Associates.

Boryczka, R. & L.L. Cary (1982). *No Strength Without Union: An Illustrated History of Ohio Workers (1803-1980)*. Columbus, Ohio: Ohio Historical Society.

Breitenbach, A.J. (2010, April). Backfill depleted open-pit mines with lined landfills, tailings, and heap leach pads. *Geosynthetics.* Retrieved on 23 May 2010 from http://geosyntheticsmagazine.com/articles/0410_f1_backfill.html

Brooks, D.B. (1966). Strip mine reclamation and economic analysis. *Natural Resources Journal, 6*, 13-44.

Brown, T.C. (2000, July 17). New York may dump extra on Ohio: Big Apple will close only landfill in 2001. *Plain Dealer*: 1B.

Buckley, G.L., T.G. Anderson & N.R. Bain. (2006). Living on the fringe: a geographic profile of Appalachian Ohio. In *Pittsburgh and the Appalachians: Cultural and Natural Resources in a Post-Industrial Age*, eds. K.J. Patrick & J.L. Scarpaci, 178-190. Pittsburgh, PA: University of Pittsburgh Press.

Burningham, K. (2000). Using the language of NIMBY: a topic for research, not an activity for researchers. *Local Environment, 5*(1), 55-67.

C & A Carbone, Inc. v. Town of Clarkstown, New York, 511 U.S. 383 (1994).

City of Philadelphia v. New Jersey, 437 U.S. 617 (1978).

Colledge, M. & L. Wilder (2008, September). Construction and demolition (C&D) landfills: emerging public and occupational health issues. *Journal of Environmental Health, 71*(2), 50-52.

*Community Life News* (1991, October). Demolition landfill subject of October 17 hearing in Shawnee (pp. 1, 12).

*Community Life News* (1991b, November). Public forums air local issues: Landfill opposition grows (p. 1, 12).

*Community Life News* (1992, March). Ohio EPA says yes to C&D landfill moratorium: SPCCE wins first round in Shawnee landfill struggle (p. 1).

Crowell, D.L. (1995). *History of the Coal-Mining Industry in Ohio*. Columbus, Ohio: Ohio Department of Natural Resources, Division of Geological Survey.

Davis, D. (1987, April 26). Some worry about jobs lost, others about health hazards. *The Charleston Gazette*: P1C.

Dickman, I.I. (1964). The strip-mine reclamation program in Ohio. *The Ohio Journal of Science, 64*(2), 165-168.

Dickstein, C. (n.d.). Should we take your garbage? Planning issues and approaches from the host region perspective. West Virginia University.

Dickstein, C. & G. Sayre (1989, June). The socioeconomic impacts of landfills. Technical Report No. 5. Regional Research Institute, West Virginia University.

DSNY (2006, September). Comprehensive Solid Waste Management Plan. Department of Sanitation New York City.

Elcock, D. & N.L. Ranek (2004). Coal Combustion Waste Management at Landfill and Surface Impoundments (1994-2004). U.S. Department of Energy: DOE/PI-0004, ANL-EVS/06-4.

Fisher, S.L. (1993). Introduction. In *Fighting Back in Appalachia: Traditions of Resistance and Change* (ed. S.L. Fisher, pp. 1-14). Philadelphia, PA: Temple University Press.

Fletcher, T.H. (2003). *From Love Canal to Environmental Justice: The Politics of Hazardous Waste on the Canada-U.S. Border*. Peterborough, Ontario: Broadview Press.

Foster, S.W. (1993). Politics, Expressive Form, and Historical Knowledge in a Blue Ridge Resistance Movement. In *Fighting Back in Appalachia: Traditions of Resistance and Change* (ed. S.L. Fisher, pp. 303-315). Philadelphia, PA: Temple University Press.

Foucault, M. (1972). *Power/Knowledge: Selected Interviews and Other Writings, 1972-1977* (ed., C. Gordon). New York: Random House.

Freudenburg, W.R. & S.K. Pastor. (1992). NIMBYs and LULUs: stalking the syndromes. *Journal of Social Issues, 48*(4), 39-61.

Gibson, T.A. (2005). NIMBY and the civic good. *City & Community, 4*(4), 381-401.

Glaberson, W. (1998, June 19). Coping in the age of 'Nimby.' *The New York Times*. Retrieved on 3 April 2010 from http://www.nytimes.com/1988/06/19/ business/coping-in-the-age-of-nimby.html? pagewanted=1

Gossett, D. (2009, August 3). Tougher odor control urged. *Herald-Star*. Retrieved on 10 August 2009 from http://www.hsconnect.com/page/content.detail/id/524145.html

Griffith, W.D. (1991, August 7). Letter to Ohio Environmental Protection Agency. Received by Ohio EPA on 13 August 1991 (Legal Records Section).

Hall, R.A. (2004, April 14). Ontario abandons Adams Mine as Landfill. *Waste Age*. Retrieved on 23 May 2010 from http://www.wasteage.com/news/Ontario-Adams-Mine/index.html

Haraway, D. (1998). Situated knowledges: the science question in feminism and the privilege of partial perspective. *Feminist Studies, 14*(3), 575-599.

Hartman, A. (2008, Spring). Stripped clean: reclaiming waterways from mining's legacy. *Southeast Ohio*, 22-25.

Hershey, W. (1991, June 13). Landfill opponents have nowhere to turn (Letter to the editor). *Dayton Daily News*: 14A.

Hornblower, M., A. Sachs & J. Willwerth. (1988, June 27). Ethics: not in my backyard, you don't. *Time*. Retrieved on 3 April 2010 from http://www.time.com/time/magazine/article/0,9171,967772,00.html

Hubbard, P. (2006). NIMBY by another name? A reply to Wolsink. *Transactions of the Institute of British Geographers, 31*(1), 92-94.

Hunt, S. (2004, May 30). Ohio among top states receiving out-of-state trash: spacious landfills with low dumping fees attract waste-haulers with debris from afar. *The Columbus Dispatch*: 01A.

Hunt, S. (2006, April 24). Plan would turn mine into dump for East Coast trash. *The Columbus Dispatch*. Retrieved on 24 June 2008 from http://www.dispatch.com/live/contentbe/dispatch/2006/04/24/20060424-D8-00.html

Jones, C. (2003, July 23). Testimony of Christopher Jones, Director, Ohio EPA, before the Energy and Commerce Subcommittee on Environment and Hazardous Materials.

Keating, M., L. Evans, B. Dunham & J. Stant (2009). Waste Deep: A Report by Earthjustice. Retrieved on 23 May 2010 from http://www.earthjustice.org/library/reports/earthjustice_waste_deep.pdf

Lane, M.B. (1994, March 17). Ohio site is considered for Canadian garbage. *Plain Dealer*: 5B.

Lane, M.B. (2003, December 18). Construction-debris dump should close, official says: inspections how landfill has often taken banned items. *The Columbus Dispatch*: 06C.

Lewis, V. (Producer) & B. Singleton (Narrator). (2007). *Devil's Oven: The Fire in the Heart of the Little Cities of Black Diamonds*. USA: Goodwin Video & News Media.

Lewis, et al. (2008, Fall). Construction and demolition debris landfills: community and occupational health issues. *Florida Journal of Environmental Health, 200*, 8-11.

Light, M. (2010, March 13). DEP Oks debris for city site. *Standard Speaker*. Retrieved on 23 May 2010 from http://standardspeaker.com/news/dep-oks-debris-for-city-site-1.676041

Lowe, S. (2005, January). Disposal of solid waste in Michigan landfills: imported waste and environmental concerns. Retrieved on 5 September 2009 from http://www.senate.michigan.gov/sfa/publications/issues/solidwaste/solidwastedisposal.pdf

Luloff, A.E., S.L. Albrecht & L. Bourke. (1998). NIMBY and the hazardous waste and toxic waste siting dilemma: the need for concept clarification. *Society & Natural Resources, 11*(1), 81-89.

Malaska, D. (2010, February 3). Workers laid off after 'living wage' battle. *CityBeat*. Retrieved on 18 May 2010 from http://www.citybeat.com/cincinnati/article-19908-workers-laid-off-after-living-wage-battle.html

McCarthy, J. (2002). "First World political ecology: lessons from the Wise Use movement" *Environment and Planning A* 34(7) 1281-1302.

McCarthy, J.E. (2004, September 9). Interstate Shipment of Municipal Solid Waste: 2004 Update. Congressional Research Service. Order code RL32570.

McCarthy, J.E. (2007, June 13). Interstate Shipments of Municipal Solid Waste: 2007 Update. Congressional Research Service. Order code RL34043.

McClymont, K. & P. O'Hare. (2008). 'We're not NIMBYs!' Contrasting local protest groups with idealised conceptions of sustainable communities. *Local Environment, 13*(4), 321-335.

McComas, M.R. (1972). Geology and land reclamation. *The Ohio Journal of Science, 72*(2), 65-75.

McSweeney, K. & R. McChesney (2004, January). Outbacks: the popular construction of an emergent landscape. *Landscape Research, 29*(1), 31-56.

Moore, T. (2006, April 29). Plans for old mine get mixed reactions. *The Ironton Tribune*. Retrieved on 16 June 2008 from http://www.irontontribute.com/articles/2006 /05/19/ news/news797.prt

Morris, J.A. (1994). *Not in My Back Yard: The Handbook*. San Diego, CA: Silvercat Publications.

Morrone, M. (2008). Environmental justice and health disparities in Appalachia, Ohio. *Environmental Change and Human Security* (P.H. Lotta et al., eds.), 299-323.

Napsha, J. (2007, September 30). Ohio landfill harms health, opponents say. *Pittsburgh Tribune-Review*. Retrieved on 17 August 2009 from http://pittsburghlive.com/x/ pittsburghtrib/business/s_530118.html

NYC Department of City Planning (2010). Fresh Kills Park Project: About the Site. Retrieved on 23 May 2010 from http://www.nyc.gov/html/dcp/html/fkl/fkl3.shtml

Ohio Department of Health (2009, January 22). Health Consultation: A&L Salvage C&DD Landfill (Private Wells). Prepared by ODH under cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR).

Ohio EPA (1991, May 6). Application for a Permit to Operate an Air Contaminant Source (Perry Environmental Recycling, Inc.). EPA-3161.

Ohio EPA (1991, May 6b). Application for Permit to Install (Perry Environmental Recycling). EPA-3150.

Ohio EPA (2004, January 27). DSIWM Guidance 0626: Landfill Closure and Post-Closure Care. Division of Solid and Infectious Waste Management.

Ohio EPA (2005). Facility Data Report. Division of Solid and Infectious Waste Management.

Ohio EPA (2006, August). Response to Comments Received for the Draft Solid Waste Permit to Install (PTI Application Number 06-07741), the Proposed Modification to NPDES Permit Number OIN00251*AD, and the Draft Air Permit to Install (PTI Number 06-07903) for Tunnel Hill Reclamation Located in Perry County.

Ohio EPA (2006b). Response to Comments Received for PTI Application Number 02-12954 and PTI Application Number 15-01601 for the American Landfill located in Stark County. Division of Air Pollution Control.

Ohio EPA (2007). Response to Comments (Washington Environmental: Air Permit-to-Install). Ohio EPA ID: 01-12041. Division of Air Pollution Control.

Ohio EPA (2009). Summary of Public Comments and Responses (Apex Sanitary Landfill). Permit-to-Install Application No. 06-08438. Division of Solid and Infectious Waste Management.

Ohio EPA (2010, January 26). Facility Data Report Tables (Draft). Division of Solid and Infectious Waste Management.

Pellow, D.N. (2002). *Garbage Wars: The Struggle for Environmental Justice in Chicago*. Cambridge, MA: The MIT Press.

Powers, S. (1992, June 1). Landfill companies' deals raise ethical questions. *The Columbus Dispatch*: 05B.

Riskind, J. (1999, June 18). Voinovich tries to salvage waste legislation: the proposal would give states some control over out-of-state garbage. *The Columbus Dispatch*: 04C.

Robbins, P. (2004). *Political Ecology: A Critical Introduction*. Malden, MA: Blackwell Publishing.

Rogers, H. (2005). *Gone Tomorrow: The Hidden Life of Garbage*. New York: The New Press.

Roy, A. (1907). *A History of the Coal Miners of the United States* (Third Ed.). Columbus, Ohio: J.L. Trauger Printing Company.

Rumpke (2009, February). Fact Sheet: Rumpke's Beech Hollow Landfill. Retrieved on 23 May 2010 from http://www.rumpke.com/pdfs/FactSheet_BeechHollow_Feb09.pdf

Said, E.W. (1978). *Orientalism*. New York: Vintage Books.

Shands, W.E. & R.G. Healy (1997). *The Lands Nobody Wanted: A Conservation Foundation Report*. Washington, DC: The Conservation Foundation.

Sheehan, T. (2003, June 26). Low dump fees draw debris to Ohio: environmentalists, EPA watching landfills that accept construction trash. *The Columbus Dispatch*: 01C.

Sullivan, J.F. (1987, June 28). Politics; Kean irked by battles over waste. *The New York Times*. Retrieved on 29 March 2010 from http://www.nytimes.com/ 1987/06/28/nyregion/ politics-kean-irked-by-battles-over-waste.html?scp=15&sq=nimby%20 landfill&st=cse

Swanson, S. (1991, April 2). State OKs old strip mine for a mammoth landfill. *Chicago Tribune*. Retrieved on 23 May 2010 from http://articles.chicagotribune.com/1991-04-02/news/9101300380_1_illinois-pollution-control-board-landfill-sites-mammoth-landfill

*The Ironton Tribune* (2002, August 17). County entities losing tax dollars. Retrieved on 16 June 2008 from http://www.irontontribune.com/articles/2002/08/17/news/export8172.prt

*The New York Times* (1880, December 27). The miners complaining: a causeless disturbance in the Hocking Valley region. Page 1.

*The New York Times* (1884, September 8). The mining war in Ohio: a crisis near at hand – defeat of the strikers probable. Page 1.

*The New York Times* (1885, June 4). Reducing their own wages: miners resume work at rates far below the former scale. Page 5.

*The New York Times* (1886, December 6). The coal miner's strike: fears that the Hocking Valley men will go out. Page 2.

*The Times-Reporter* (2009, October 2). Our opinion: settlement is no reason to celebrate. Retrieved on 1 December 2009 from http://www.timesreporter.com/ opinion/x576532845/Our-opinion-Settlement-is-no-reason-to-celebrate

USDA Forest Service (2009, January). Wayne National Forest. Retrieved on 16 May 2010 from http://www.fs.fed.us/r9/wayne

US EPA (2002, August 28). Site visit report: Coal combustion waste minefill management practices (Draft Final). Retrieved on 21 May 2010 from http://www.epa.gov/osw/nonhaz/industrial/special/fossil/sites/oh-visit.pdf

US EPA (2004, January). Second Five-Year Review Report for Coshocton City Landfill.

Walker, G. (2009). Beyond distribution and proximity: exploring the multiple spatialities of environmental justice. *Antipode, 41*(4), 614-636.

Weaver Boos Consultants (2006, June). Permit to Install Application (Municipal Solid Waste Landfill): Volume I of III: Environs, Calculations & Plans (Prepared for Tunnel Hill Reclamation, LLC).

Welsh, I. (1993). The NIMBY syndrome: its significance in the history of the nuclear debate in Britain. *British Journal for the History of Science, 26*, 15-32.

Wexler, M.N. (1996). A sociological framing of the NIMBY (not-in-my-backyard) syndrome. *International Review of Modern Sociology, 26*(1), 91-110.

Winnenberg, J. (n.d.). On self-esteem, being Appalachian & highway detours. *Community Life News* (ed. J. Winnenberg, p. 2). Shawnee, Ohio.

Winnenberg. J. (1991, December). Landfill hearing model for democracy of the future. *Community Life News*: p. 2.

Wolsink, M. (1994). Entanglement of interests and motives: assumptions behind the NIMBY-theory on facility siting. *Urban Studies, 31*(6), 851-866.

Wolsink, M. (2006). Invalid theory impedes our understanding: a critique on the persistence of the language of NIMBY. *Transactions of the Institute of British Geographers, 31*(1), 85-91.

Woods, J. (1990, April 16). Ohio firm plans new landfill: McArthur Mayor fears water could be contaminated. *The Columbus Dispatch*: 01D.

Woods, J. (1991, November 7). EPA's handling of landfill plan angers village. *The Columbus Dispatch*: 02C.

Yocum, R. (1987, July 24). Ohio's EPA gets tough on outside trash. *The Columbus Dispatch*: 1C.

Young, K. (2010, January 14). Appeals panel says Osnaburg landfill can expand. *CantonRep.com*. Retrieved on 4 February 2010 from http://www.cantonrep.com/news/x1689205595/Appeals-panel-says-Osnaburg-landfill-can-expand